

*Sheet 1 of 20*

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tgacaggtgccacaggcactggggatctcaccagaaaggaaccgacggagctaggggccagcgagatggcggac  
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**FIG. 1A**

*Sheet 2 of 20*

caacacagccactgagaccaccacgaggcacagccagcgggcagctgatggctctgctgtcagcactgttaccaag  
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cagccagtggcaagctgccgccccactctcggggcaccgtctcctgctgtgcgtccgcccaccgctgccctgtctgttg  
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*FIG. 1B*

*Sheet 3 of 20*

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*FIG. 2A*

*Sheet 4 of 20*

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gcttattctattccccacccacacccccaggcaggggtggaaatgaaggacttttaaccttgtttgttttaaaaataaat  
ctgtaaaatctgaaaaaaaaaaaaaaaa

*FIG. 2B*

*Sheet 5 of 20*

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*FIG. 3A*

*Sheet 6 of 20*

ccccagaaggtgagtgctgtcatggaaaatgtcctgtggtagagggccagtggaacagtcaccctctgggcaagg  
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ttgggtctcttaccgagagactgagaggcagaagtcagcc

*FIG. 3B*

*Sheet 7 of 20*

MADEALAGLDEGALRKLEVTADLAERRRIRSAIRELQRQELEREEEEALASKRFRAER  
QDNKENWLHSQQREAEQRAALARLAGQLESMNDVEELTALLRSAGEYEERKLIRAAI  
RRVRAQEIEAATLAGRLYSGRPNSGSRREDSKGLAAHRLEQCEVPEREEQEQQAQAEVS  
KPTPTPEGTSQDVTTVTLLLRAPPGSTSSSPASPSSSPTPASPEPPPLEPAEAQCLTAE  
VPGSPEPPPSPPKTTSPPEQESPTLPSTEGQVVNKLLSGPKETPAAQSPTRGPSDTK  
RADVAGPRPCQRSLSVLSPRQPAQNRESTPLASGPSSFQRAGSVRDRVHKFTSDSP  
MAARLQDGTQAALSPLTPARLLGPSLTSTTPASSSSGSSSRGPSDTSSRFSKEQRG  
VAQPLAQLRSCPQEEGPRGRGLAARPLENRAGGPVARSEEPGAPLPVAVGTAEPGG  
SMKTTFTIEIKDGRGQASTGRVLLPTGNQRAELTLGLRAPPTLLSTSSGGKSTITRVNS  
PGTLARLGSVTHVTSFSHAPPSSRGGCSIKMEPEPAEPLAAAVEAANGAEQTRVNKA  
PEGRSPLSAEELMTIEDEGVLDKMLDQSTDFEERKLIRAAALRELQRKRDRDQDKERE  
RRLQEARGRPGEGRGNTATETTTTRHSQRAADGSVSTVTKTERLVHSNDGTRTART  
TTVESSFVRRSENGSGSTMMTKTFSSSSSSSKMGSIKDREDQASPRAGSLAALEKR  
QAEKKKELMKAQSLPKTSASQARKAMIEKLEKEGAAGSPGGPRAAVQRSTSFGVNP  
ANSIKQMLLDWCRAKTRGYEHVDIQNFSSSWSDGMAFCALVHNFFPEAFDYGQLSP  
QNRQRNFVAFSSAETHADCPQLLDTEDMVRLREPDWKCVYTYIQEFYRCLVQKGL  
VKTKKS

*FIG. 4*

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MCLRGGCSPRAPAAAPQPRPPPALPPRPRAPVPASRPGRPLLTPARPCGRMRRGS  
PGPRLGGSRGERRRPAGRDPARVGPQGGLRRPARPGPAAWTETGQGIVHALTDLSI  
PGMTSGNGNSASSIAGTAPQNGENKPPQAIVKPQILTHVIEGFVIQEGADVSRWDARL  
LVGNLKKKYAQGFLPEKLPQQDHTTTTDDSEMEEPYLVESKEEGAPLKLKCELCGRVD  
FAYKFKRSKRFCSMACAKRYNVGCTKRVGLFHSDRSKLQKAGAATHNRRRPAKPVC  
HHLPRIPRSSQQALCPFRLLLLCVTHSQEDSSRCS DNSSYEEPLSPISASSSTSAGDK  
ASGTWSSPTCICGTWWAWDTTSCQVSHQVNVEDVYEFIRSLPGCQEIAEEFRAQEID  
GQALLLLKEDHLMSVMNIKLGPALKIYARISMLKDS

*FIG. 5*

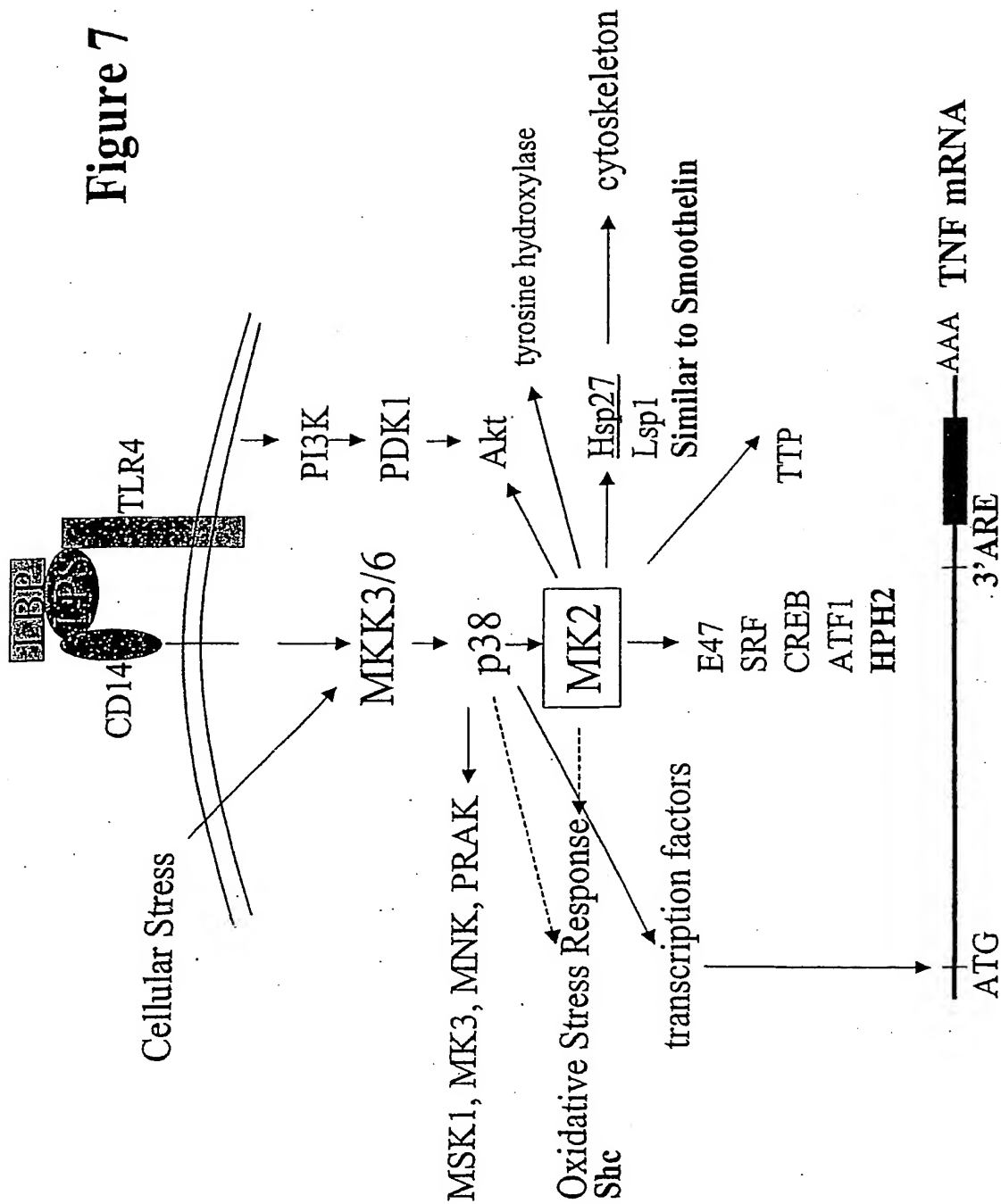
*Sheet 9 of 20*

MDLLPPKPKYNPLRNESLSSLEEGASGSTPPEELSPSPASSLGPIPLPGDDSP LPC  
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SGGGGRRTRVEGGQLGGEWTRHGSFVNKPTRGWLHPNDKVMGPGVSYLVRYMG  
CVEVLQSMRALDFNTRTQVTREASLVCEAVPGAKGATRRRKPCSRPLSSILGRSNLK  
FAGMPITLTVSTSSLNLMAADCKQIIANHHMQSISFASGGDPDTAEYVAYVAKDPVNQ  
RACHILECPEGLAQDVISTIGQAFELRFKQYLRNPPKLVTPHDRMAGFDGSAWDEEE  
EEPPDHQYYNDFPGKEPPLGGVVDMLREGAARPTLPSAQMSH LGATLPIGQHAA  
GDHEVRKQMLPPPPCPGRELFDDPSYVNIQNLDKARQAGGGAGPPNPSLNGSAPRD  
LFDMPFEDALRVPPPPQSMSMAEQLQGEPWFHGKLSRREAEALLQLNGDFLVRES  
TTTPGQYVLTGLQSGQPKHLLLVDPEGVVRTKDHRFESVSHLISYHMDNHLPIISAGS  
ELCLQQPVDRKV

*FIG. 6*

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Figure 7



Sheet 11 of 20

# Shc A



## Human Polyhomeotic 2



## Similar to Smoothelin



FIG. 8

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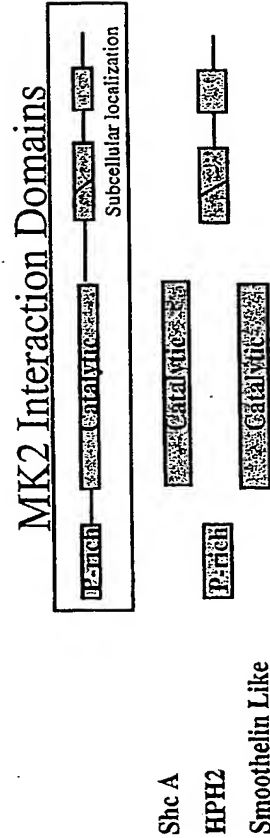
FIG. 9A

Yeast Assays			
Growth		Color	
MK2			
Interactor &:	V K93R L V K93R L		
Media:	-ad, -his, -leu, -trp		-leu, -trp, X alpha GAL

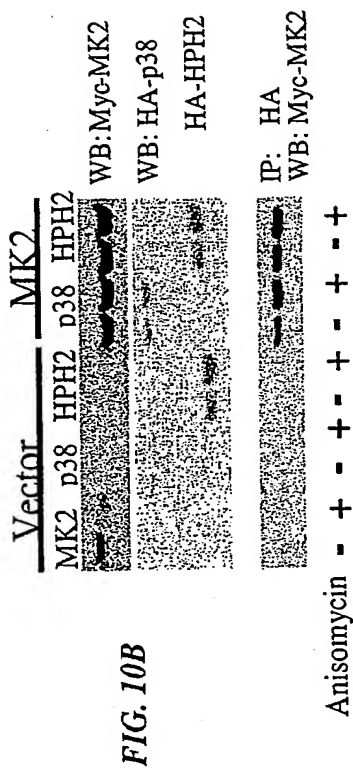
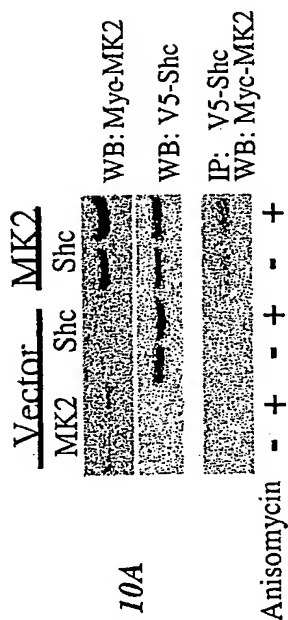
FIG. 9B

Growth & Color			
Protein	V	K93R	MK2
Shc A	-	+	+
Human Polyhomeotic 2	-	+	+
Smoothelin Like	-	+	+
			TPL2 Lamin

FIG. 9C



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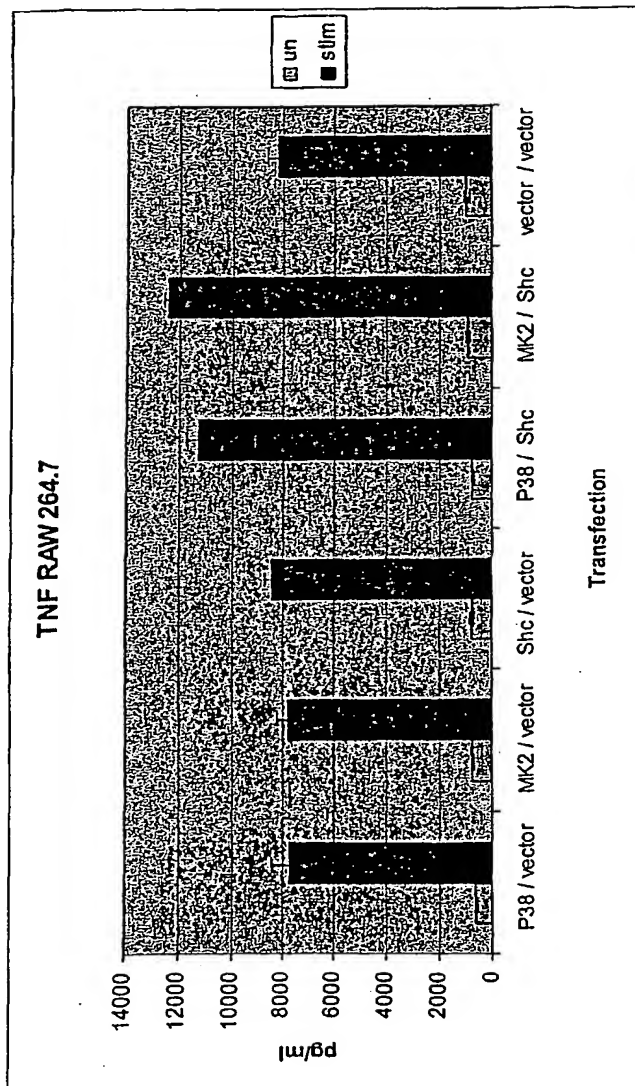


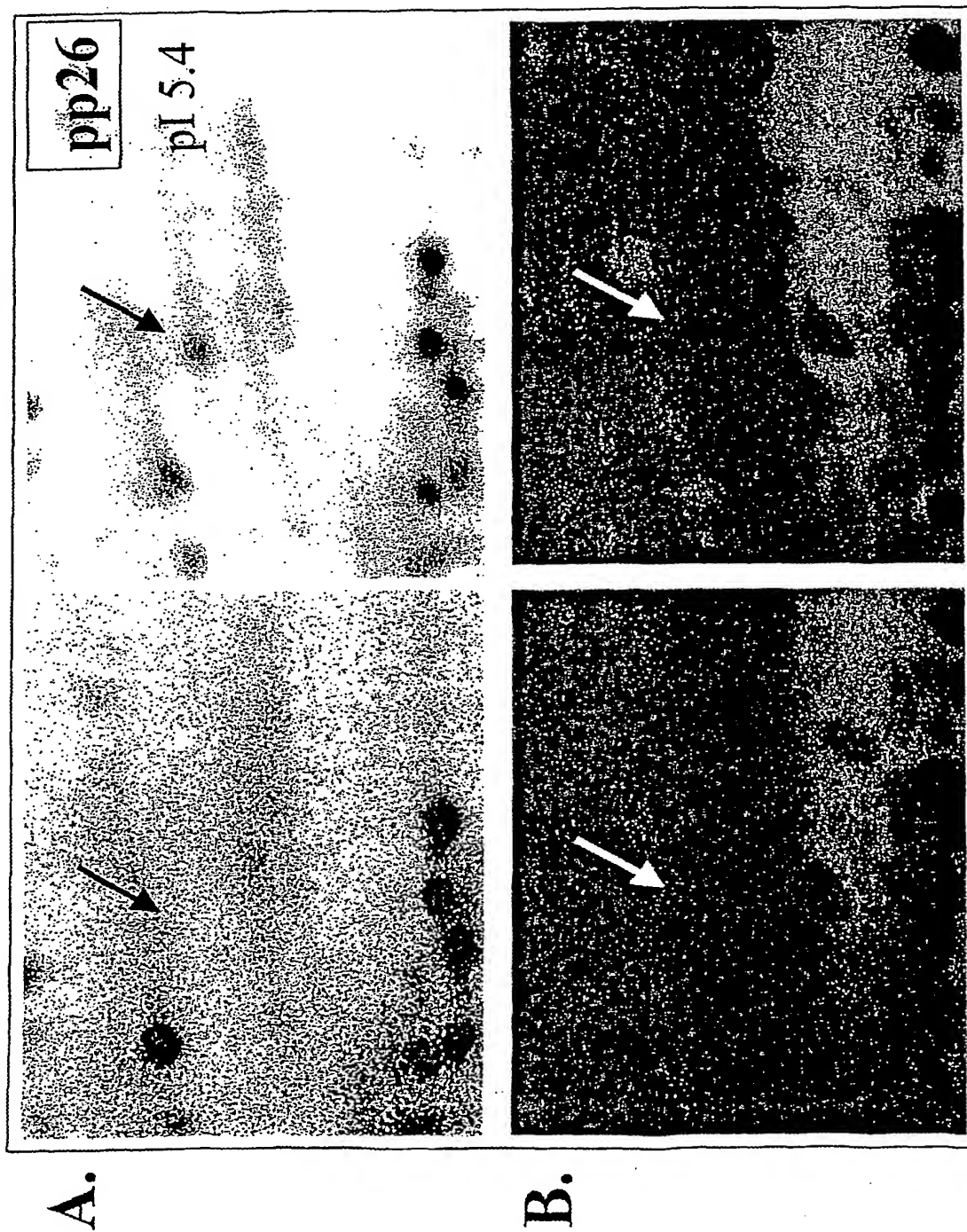
Figure 11

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Figure 12

MK2-/-

MK2+/+



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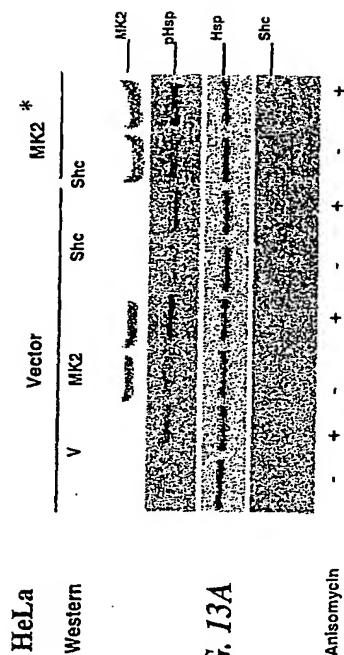


FIG. 13A

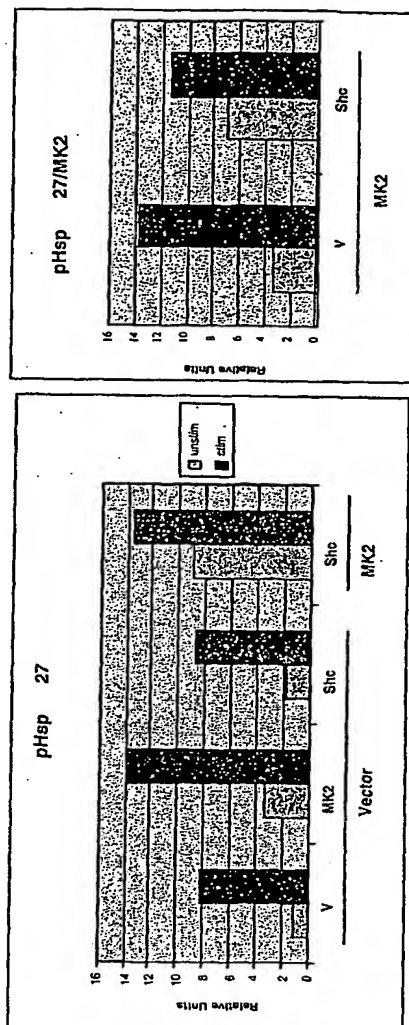
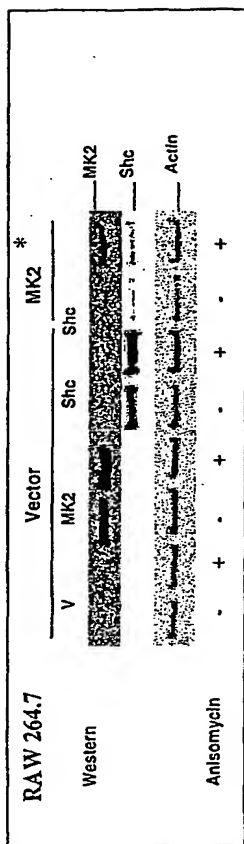
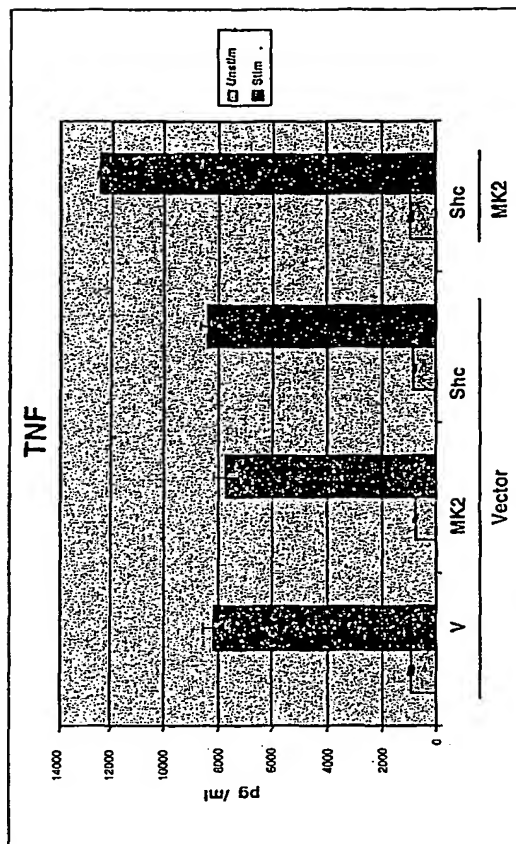


FIG. 13B

FIG. 13C



**FIG. 14B**



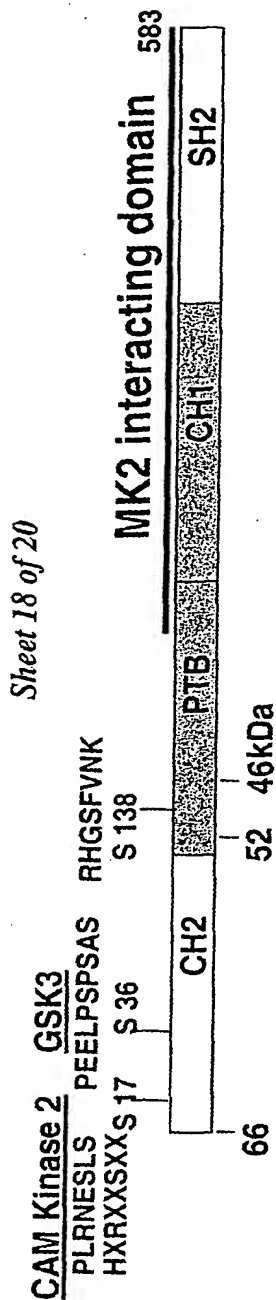


FIG. 15A

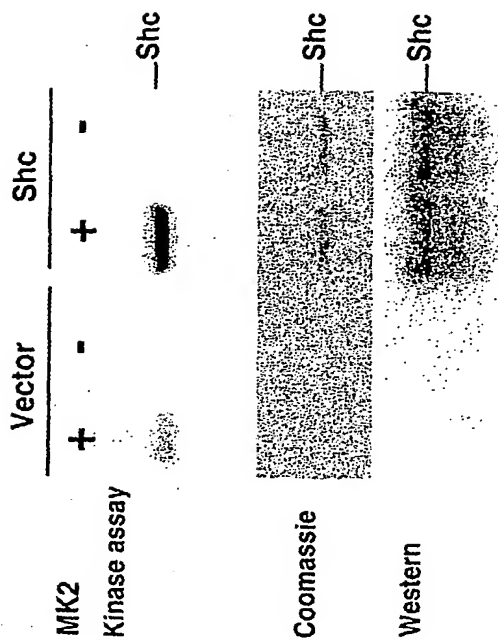


FIG. 15B

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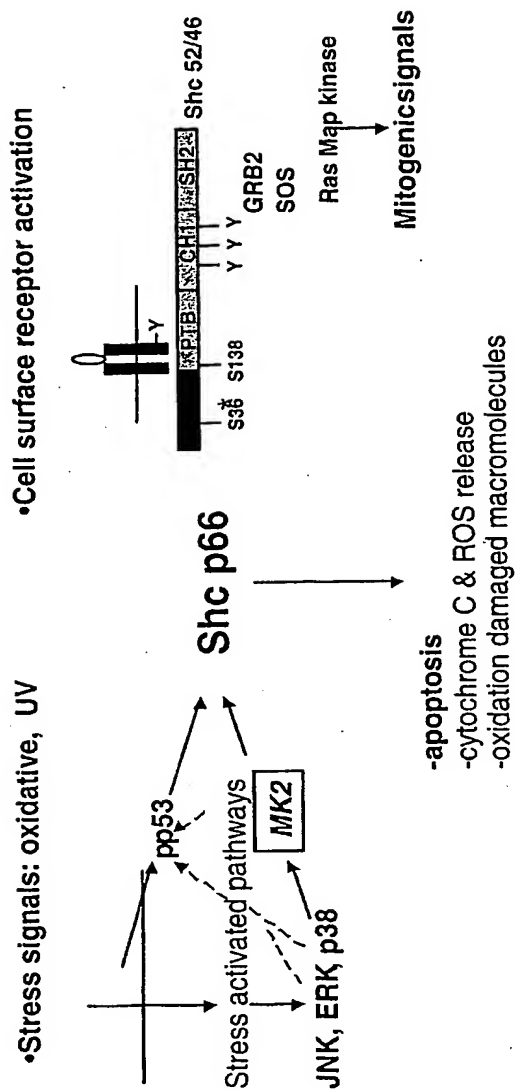
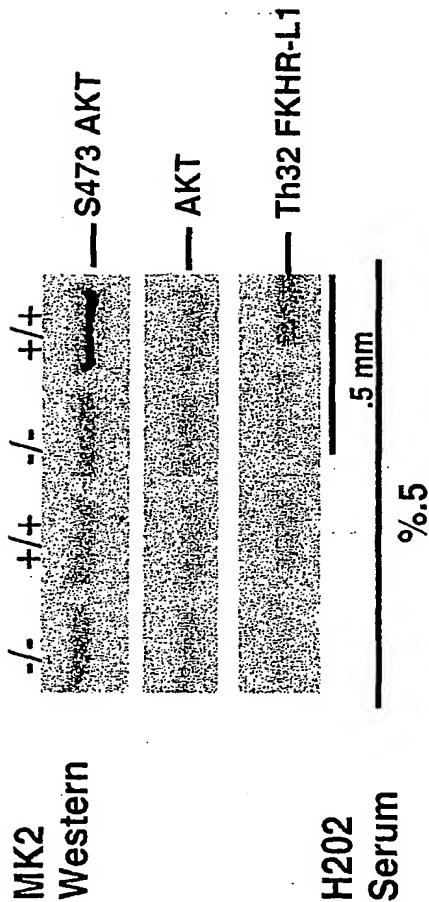
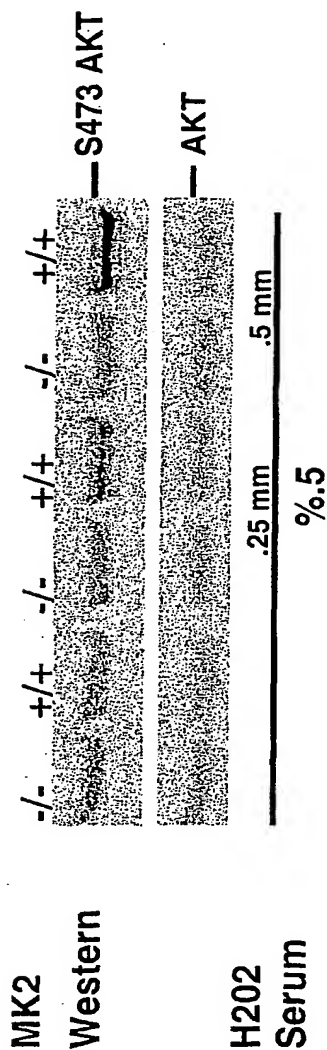


FIG. 16

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**H202 Serum**

FIG. 17